

REMARKS

Status of Claims

Claims 1-9 are pending, of which claim 1 is independent.

Claim Rejection - 35 U.S.C. § 103

Claims 1-4 and 7-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dohle et al. (WO 03/047010, using US 2005/0084729) in view of Grot (USP 6,663,862). Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Dohle et al. in view of Grot, and further in view of Gorman et al (USP 6,124,054). Claims 6 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dohle et al. in view of Grot, and further in view of Luft et al. (USP 6,509,112). These rejections are traversed for at least the following reasons.

The Examiner asserts that Dohle discloses a fuel cell system comprising a fuel cell and a purifying apparatus, as recited by claim 1 except for the anode side porous layer in a purifying apparatus. The Examiner then relies on Grot asserting that Grot discloses the use of diffusion layers on opposing sides of a catalyst layer.

Applicants respectfully submit that Dohle fails to disclose that the second flow path has *an inlet into which air is introduced* and that the effluent is directed to the porous sheet without being mixed with the air, as recited by claim 1. In Dohle, the alleged second flow path (flow 1) is a supply line for supplying “air” as an oxidizing agent (see, paragraph [0013] of Dohle) to the cathode compartment (see, paragraph [0018] of Dohle). As such, the effluent discharged from the anode A is mixed with the air, which passes through the cathode K, before arriving at the alleged purifying apparatus. Thus, Dohle fails to disclose that effluent is directed to the porous sheet without being mixed with the air, and hence fails to disclose the claimed second flow path.

It is also clear that none of the remaining cited references disclose or suggest the above identified features of claim 1.

Further, Applicants respectfully submit that none of the cited references disclose or suggest that "*the effluent discharged from said anode is passed through said porous sheet and discharged from said outlet,*" as recited by claim 1. With this feature, the following effect can be obtained:

The effluent discharged from the anode is always passed through the porous sheet including the catalyst layer before being discharged. Thus, most of unreacted fuel or by-products have a chance to come into contact with the catalyst. Hence, unreacted fuel or by-products are catalytically combusted with high efficiency, thereby being converted into water and carbon dioxide (see, paragraph [0017] of the present specification).

In this regard, the Examiner concedes that Dohle fails to disclose or suggest this feature. However, the Examiner asserts that Grot discloses this feature of claim 1. Applicants disagree. Applicants respectfully submit that Grot is directed to a structure of a fuel cell electrode, while the present subject matter is directed to a fuel cell system including a ***purifying apparatus***. It is clear that the ***porous sheet***, through which the effluent discharged from the anode is passed, is a part of the ***purifying apparatus*** in the present subject matter. Since in Grot, the alleged porous sheet (diffusion layers 15, 15A) is a part of the electrode (either a cathode or an anode), the effluent discharged from the anode (i.e., electrode) does not pass through the porous sheet. Although Grot appears to disclose the use of a porous sheet, it is clear that Grot fails to disclose that "*the effluent discharged from said anode is passed through said porous sheet and discharged from said outlet,*" as recited by claim 1. It is also clear that none of the remaining cited references disclose or suggest the above identified features of claim 1.

Accordingly, Applicants respectfully submit that none of the cited references, taken alone or in any combination thereof, renders claim 1 or any claims dependent thereon obvious. Thus, it is requested that the Examiner withdraw the rejections of claims 1-9 under U.S.C. § 103(a).

Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: September 4, 2009